

TITLE

MAILBOX POST BRACKET

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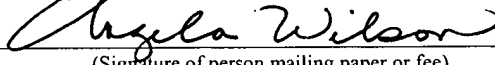
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MAILBOX POST BRACKET

BACKGROUND OF THE INVENTION

1. Field of the Invention – The present invention relates generally to mailboxes for use adjacent roadways. More particularly, the present invention relates to the bracket
5 used to secure a conventional mailbox to the post on which it is mounted.

2. Summary of the Prior Art – For decades, the mailbox has been a familiar sight along the roadways of America, particularly along rural roads and highways. Because these mailboxes are typically arranged only a few feet from the edge of the roadway,
10 highway authorities often prescribe regulations dealing with the construction of such mailboxes. The design of the mailbox itself is prescribed by the postal authorities, i.e. the United States Postal Service (USPS).

Due to their location adjacent roadways, mailboxes and other roadside features
15 often are struck in roadway accidents, making their construction to be “crash worthy” an issue of some importance. The National Cooperative Highway Research Program has promulgated standards for the safety evaluation of highway features such as signs and sign supports in Report 350. The standards set forth in Report 350 relate to the behavior
20 of highway features when struck by a vehicle. The desired behavior is that the sign or other feature fail in such a way that property damage and personal injury are minimized to the extent possible. Thus, the terms “crashworthiness” and “crash worthy,” as used

herein, actually mean susceptibility to failure in the event of a crash or collision, rather than resistance to failure. The standards and testing methodologies contained in Report 350 have been adopted by most states. Therefore, the majority of roadside signs and features are made in consideration of, if not in compliance with, the standards of Report 350.

Consistent with this concern over the construction of roadside features, it is typical for a mail customer who intends to place a mailbox by the roadside to apply to the local office of the highway regulation authority for permission to place the box. In some states, the authorities themselves provide the post and install a USPS-approved mailbox on an approved, crash worthy post in what the authorities deem a safe location and in a safe fashion.

The conventional mailbox and post assembly, including the bracket, when struck by a vehicle, sometimes exhibits a mode of failure in which the mailbox detaches from the post and can come through the windshield of the vehicle, thereby posing a grave risk to the occupants of the vehicle in what otherwise might be a relatively minor accident.

A need exists for both posts and brackets for securing the mailbox to the post that are easily and inexpensively manufactured and fail in a relatively safe or crash worthy mode in the event of an accident.

SUMMARY OF THE INVENTION

It is a general object of the present invention to provide an improved bracket for securing a mailbox to a support post that is circular in cross-section.

5 This and other objects of the present invention are achieved by providing a bracket comprising a laminar plate that is generally coextensive with a lower surface of the mailbox and has means for securing the mailbox to the plate. A generally cylindrical sleeve is secured to the plate and extends downwardly therefrom. The sleeve is adapted to receive a generally cylindrical post and includes means for securing the post within the
10 sleeve.

 According to the preferred embodiment of the present invention, the laminar plate is rectangular and has a pair of long edges.

15 According to the preferred embodiment of the present invention, the means for securing the mailbox to the plate further comprises a flange on each of the long edges of the plate extending generally perpendicular to the plate and at least one fastener securing the flange to a corresponding flange on the mailbox. The fastener may be a nut and a
20 bolt.

According to the preferred embodiment of the present invention, the means for securing the post within the sleeve further comprises an aperture formed through the sleeve and the post and a bolt extending through the aperture, thereby securing the sleeve against movement relative to the post.

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According to the preferred embodiment of the present invention, the plate is provided with a plurality of lightening holes.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is an elevation view of a mailbox of the type with which the present invention is contemplated for use, illustrating a prior-art post and bracket.

5 Figure 2 is a partial section view, taken along section line 2—2 of Figure 1, illustrating the prior-art bracket.

Figure 3 is a perspective view of the mailbox bracket according to the present invention.

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Figure 4 is a plan view of the mailbox bracket of Figure 3.

Figure 5 is an elevation view of the mailbox bracket of Figures 3 and 4.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the Figures, and particularly to Figures 1 and 2, a prior-art mailbox assembly 11 is illustrated. The assembly comprises a mailbox 1, which is commonly available and made to USPS standards. Mailbox 1 is secured atop a post 3, which conventionally is provided by the highway regulation authorities. In this case, post 3 that is illustrated is formed of steel and has a plurality of holes along its length. Mailbox 1 is secured atop post 1 by means of a bracket 5, which is illustrated in greater detail in Figure 2.

Bracket 5 has a generally flat, rectangular plate 7 that is generally coextensive with bottom 9 of mailbox 1. Plate 7 has a pair of upwardly extending flanges 13 along its long edges. Flanges 13 mate with corresponding downwardly turned flanges on mailbox 1, and nuts, screws, or rivets are used to secure the two together. A steel L-shaped bracket 15 is secured, typically by bolts, to the bottom of plate 7 and extends downwardly to permit bracket 5 and mailbox 1 to be secured by bolts to post 3. This bracket is satisfactory in most respects, except that it has been observed that a fairly typical failure mode for this design, in the event of a collision with a vehicle, is for mailbox 1 to shear off of bracket 5 in a plane parallel to plate 7 and bottom 9 of mailbox 1. When this occurs, mailbox 1 then is free to come through the windshield of the vehicle, with potentially fatal consequences for the vehicle's occupants.

Figures 3, 4, and 5 are various views of mailbox bracket 111 according to the preferred embodiment of the present invention. This embodiment, as tested, seems to avoid the failure mode described above and is also adapted to receive a cylindrical (circular in cross section) post as described in commonly invented application serial number _____, entitled SIGNPOST FORMED OF RECYCLED MATERIAL and filed November 26, 2003, which is more aesthetically pleasing than the conventional post shown in Figure 1. As shown, bracket 111 comprises a rectangular, generally laminar plate 113, which is generally coextensive with the bottom surface of mailbox 1 (it is not necessary that plate 113 be as long as mailbox, but must be as wide).

A pair of downwardly extending flanges 115 are formed on the long edges of plate 113 and are provided with a plurality of oblong holes 119 to facilitate mounting to the corresponding downwardly turned flanges on mailbox 1 by bolts (see Figure 2). A plurality of lightening holes or apertures 117 are formed through plate 113 to save material and reduce the overall weight of bracket 115. A cylindrical sleeve 121 is secured to a central portion of plate 113 and extends downwardly therefrom in the same direction as flanges 115.

Sleeve 121 thus forms a socket adapted to receive a cylindrical post. An aperture 123 is provided in the wall of sleeve 121 and extends through both walls of sleeve 121. A corresponding aperture or hole in a post thus can be aligned with aperture 123 and a bolt

or cotter pin (not shown) used to secure mailbox 1 and bracket 111 to the post and against rotation relative to the post.

According to the preferred embodiment of the present invention, plate 113 is
5 formed from a sheet of 0.074 inch 14-gauge type A36 mild steel 121. Sleeve 121 preferably is formed of 2.5 inch O.D. by 0.065 inch wall thickness 1020 steel and is wire welded to plate 113 in a conventional manner. These dimensions are given for a post having a nominal outer diameter of 2.5 inches. Dimensions will, of course, vary with the application.

10 In operation, mailbox 1 is placed atop plate 113 and holes 119 in flanges 115 are aligned with corresponding holes (not shown) in the flanges (Figure 1) on mailbox 1. According to the preferred embodiment, bottom 9 of mailbox 1 then is in close proximity to plate 113. Bracket 111 and sleeve 121 are placed atop a cylindrical post and a bolt or
15 pin used to secure them together. Testing indicates that the bracket as described herein avoids the potentially troublesome failure mode described above. It is also adapted to be used with a more aesthetically pleasing cylindrical post.

20 The invention has been described with reference to a preferred embodiment. It is thus not limited, but is susceptible to variation and modification without departing from the scope of the invention.